Appendix D
Field Collection Forms

SEDIMENT CORE COLLECTION FORM

Windward environmental LLC

Sediment Core Collection Form

Page ___ of ___

Project: | **Location ID:**

Date: | **Attempt No.:**

Weather: | **Core Type:** Intertidal Subtidal Shoaling

Logged By: | **Field Staff:**

Field Collection Coordinates:

Lat/Northing: | Long/Easting:

A. Water Depth

DTM Depth Sounder:

DTM Lead Line:

B. Water Level Measurements

Time:

Height:

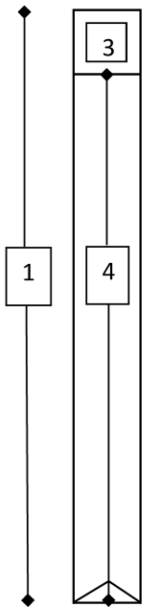
Source:

C. Mudline Elevation (ft MLLW)

Recovery Measurements (prior to cuts)

Core Collection Recovery Details:

1. Core Tube Length:
2. Penetration Depth:
3. Headspace Measurement:
4. Recovery Depth:
5. Recovery Percentage:
6. Core Accepted: Yes / No



Core Sections To Process:

A:

B:

C:

D:

Drive Notes:

Shoe Description:

Core Field Observations and Description: | Sediment type, moisture, color, minor modifier, MAJOR modifier, other constituents, odor, sheen, layering, anoxic layer, debris, plant matter, shells, biota

Notes:

SEDIMENT CORE PROCESSING FORM

Windward environmental LLC

Sediment Core Processing Form

Project:	**Core Type:** Intertidal Subtidal Shoaling
Date:	**Penetration Depth:**
Processed By:	**Compacted Depth:**
Location ID:	**Compaction-Correction Factor:**
Attempt No.:	

Recovery Depth	Correction Depth	Sample ID		**Sample Description and Notes** (Sediment type, moisture, color, minor modifier, MAJOR modifier, other constituents, odor, sheen, layering, anoxic layer, debris, plant matter, shells, biota)

SURFACE SEDIMENT COLLECTION FORM

Project Name: _____ **Project no.:** _____

Date: _____ **Weather:** _____

Sampling Method: _____ **Crew:** _____

GRAB DATA	**Location ID:**			
Latitude/Northing(Y):				**Longitude/Easting(X):**
Grab time	**Water depth (m)**	**Penetration depth (cm)**	**Acceptable grab (Y/N)**	**Comments**
SAMPLE DATA	**Sample ID:**			
Pre-homogenization analyses (circle): VOC Sulfides Ammonia AVS/SEM TPH-P Other:				

Sediment type	**Sediment color**	**Sediment odor**		**Comments:**
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	**Location ID:**			
Latitude/Northing(Y):				**Longitude/Easting(X):**
Grab time	**Water depth (m)**	**Penetration depth (cm)**	**Acceptable grab (Y/N)**	**Comments**
SAMPLE DATA	**Sample ID:**			
Pre-homogenization analyses (circle): VOC Sulfides Ammonia AVS/SEM TPH-P Other:				

Sediment type	**Sediment color**	**Sediment odor**		**Comments:**
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

Bank Soil Collection Form

Project Name/Number: ______________________ **Weather:** ______________________

Date: ______________________ **Crew:** ______________________

Sampling Method: ______________________ **Composite Sample Time:** ______________________

Bank ID: ______________________ **Composite Sample ID:** ______________________

Location ID:	Sample Time:	Sample Depth:
Location Description (coordinates or distances from landmarks; slope, elevation, proximity of three samples):		
Sample Description (i.e., including grain size, color, odor):		
Comments:		

Location ID:	Sample Time:	Sample Depth:
Location Description (coordinates or distances from landmarks; slope, elevation, proximity of three samples):		
Sample Description (i.e., including grain size, color, odor):		
Comments:		

Location ID:	Sample Time:	Sample Depth:
Location Description (coordinates or distances from landmarks; slope, elevation, proximity of three samples):		
Sample Description (i.e., including grain size, color, odor):		
Comments:		

PROTOCOL MODIFICATION FORM

Project Name and Number: _____

Material to be Sampled: _____

Measurement Parameter: _____

Standard Procedure for Field Collection & Laboratory Analysis (cite reference): _____

Reason for Change in Field Procedure or Analysis Variation: _____

Variation from Field or Analytical Procedure: _____

Special Equipment, Materials or Personnel Required: _____

Initiator's Name: _____ Date: _____

Project Officer: _____ Date: _____

QA Officer: _____ Date: _____

____ of ____

CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name: _____ Ship to: _____ No.

Project Number: _____ Attn: _____ Shipping Date: _____

Contact Name: _____ Shipper: _____ Airbill Number: _____

Sampled By: _____ Form filled out by: _____ Turnaround requested: _____

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)							Comments / Instructions [Composite/Bag ID]
Total Number of Containers				Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name:		Print name:	
Signature:	Company:	Signature:	Company:
Company:		Company:	
Date/Time:	Date/Time:	Date/Time:	Date/Time:

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WindWard environmental LLC

200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

D-2 Geotechnical Field Forms

Boring Location:

Elevation: Datum:

Obs. Well Install. Yes No

Boring _____ Date _____ Sheet _____ of _____

Job _____ Job No. _____

Logged By _____ Weather _____

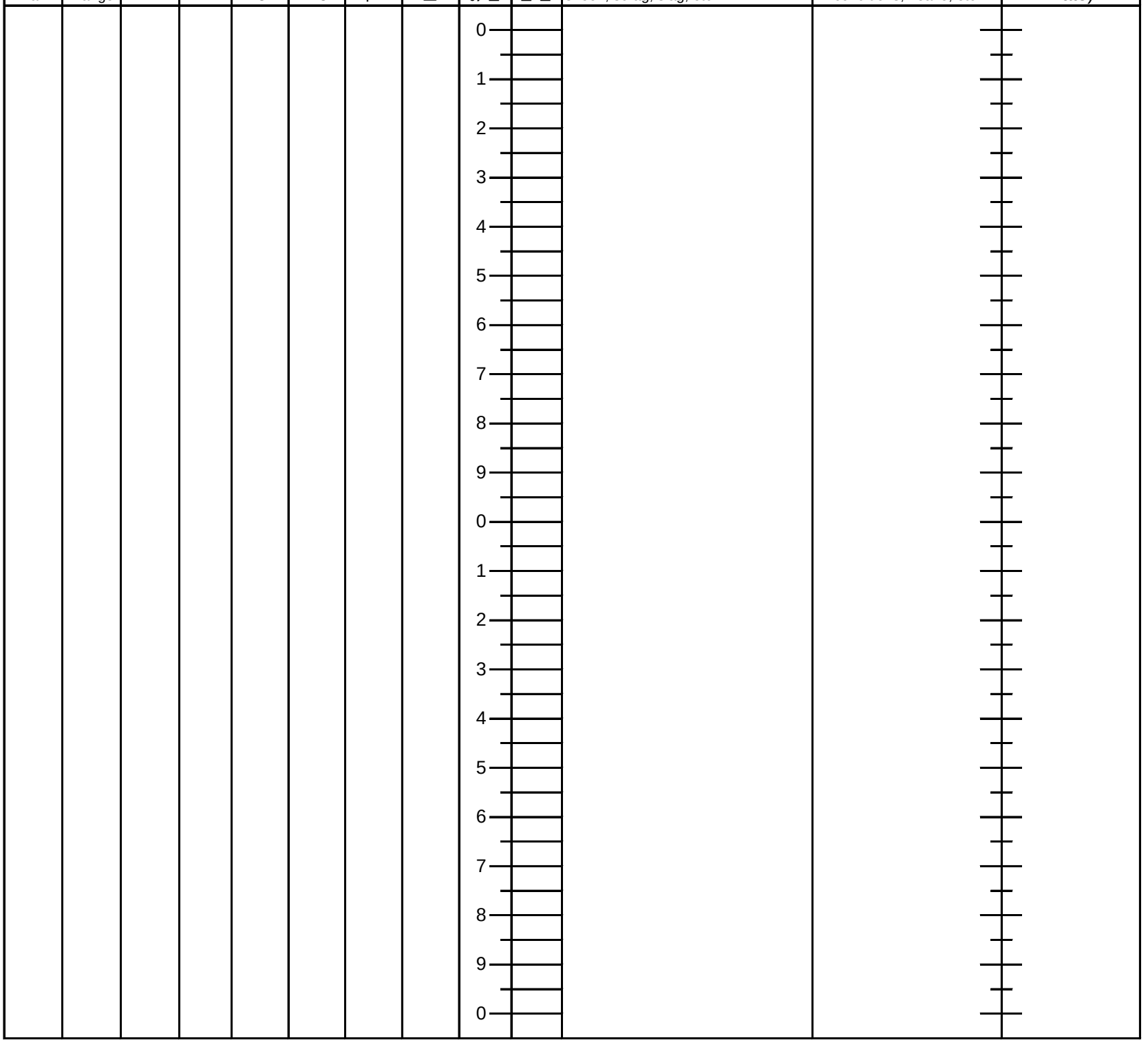
Drilled By _____

Drill Type/ Method _____

Sampling Method

Bottom of Boring _____ ATD Water Level Depth _____

SIZE (%)			PID or other	DEPTH		SAMPLE		SAMPLE RECOVERY	Penetration Resistance	DESCRIPTION: Den., moist., color, minor, MAJOR CONSTITUENT, NON-SOIL SUBSTANCES: Odor, staining, sheen, scrag, slag, etc.	REMARKS: Drill action, drill and sample procedures, water conditions, heave, etc.	SUMMARY LOG (Water & Date)
G	S	F										
Max.	Range	Att. Limits		From	To	Type	Number					



ANCHOR QEA

Boring Location:

Elevation: Datum:

Obs. Well Install. Yes No

Boring _____ Date _____ Sheet _____ of _____

Job _____ Job No. _____

Logged By _____ Weather _____

Drilled By _____

Drill Type/ Method _____

Sampling Method

Bottom of Boring _____ ATD Water Level Depth _____

SIZE (%)			PID or other	DEPTH		SAMPLE		SAMPLE RECOVERY	Penetration Resistance	DESCRIPTION: Den., moist., color, minor, MAJOR CONSTITUENT, NON-SOIL SUBSTANCES: Odor, staining, sheen, scrag, slag, etc.	REMARKS: Drill action, drill and sample procedures, water conditions, heave, etc.	SUMMARY LOG (Water & Date)
G	S	F										
Max.	Range	Att. Limits		From	To	Type	Number					
								0				
								1				
								2				
								3				
								4				
								5				
								6				
								7				
								8				
								9				
								0				

ANCHOR QEA

Vane Shear Log Form

Project: _____

Location: _____

Technician: _____

Date: _____

Vane Diameter	Vane constant (α)
16mm (0.63")	2
20mm (0.78")	1
25.4mm (1")	0.5
65mm (2.56")	0.029

$S_U = \alpha$ x Scale

Horizontal Datum: _____

Test Location ID	Coordinates		Test Time	Water Depth in feet	Test Depth below Mudline in feet	Vane Diameter in mm	Vane Scale Reading in kPa	Undrained Shear Strength (S_U)		Test Type		Notes
	Easting	Northing						in kPa	in lbs/ft^2	Peak [P]	Residual [R]	
										P	R	
										P	R	
										P	R	
										P	R	
										P	R	
										P	R	
										P	R	
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										P	R	
										P	R	
										P	R	
										P	R	
										P	R	
										P	R	
										P	R	

Note - 1 kPa = 20.89 psf

Dynamic Cone Penetrometer Field Form

ANCHOR QEA

Location ID		**Project Name**	
Lat/Northing (Y)		**Project Number**	
Lon/Easting (X)		**Date**	
Horizontal Datum		**Field Staff**	
Vertical Elevation			
Vertical Datum		**Depth to Water**	

Depth		**Reading**	**Depth**		**Reading**	**Depth**		**Reading**
cm	**ft**	**blows**	**cm**	**ft**	**blows**	**cm**	**ft**	**Blows**
10			190			370		
20			200			380		
30	1		210	7		390	13	
40			220			400		
50			230			410		
60	2		240	8		420	14	
70			250			430		
80			260			440		
90	3		270	9		450	15	
100			280			460		
110			290			470		
120	4		300	10		480	16	
130			310			490		
140			320			500		
150	5		330	11		510	17	
160			340			520		
170			350			530		
180	6		360	12		540	18	

Notes:

D-3 Survey Field Forms

Shoreline Visual Inspection Field Form

Project Name		**Field Personnel**	
Project Number		**Page**	of
Date		**Time**	
General Feature Description			
GPS Location		**Location I.D.**	

	Description	**Water Depth**	**Feature Height Above Water**
Location 1			
Location 2			
Location 3			
Location 4			
Location 5			
Location 6			

Bank Condition	Good Fair Poor	Sloped	Vertical

Visible Substrate Type	Riprap Gravel Sand Silt/Clay Debris Vegetation Other_____

Notes

Photograph Log	**Description**	**GPS Location**	

FACILITIES CONDITION ASSESSMENT REPORT

Sediment Cleanup of Upper Reach of Lower Duwamish Waterway

Facility Name:

Facility Location:

Asset Type:

Use:

Inspection Date:

Inspected By:

General Conditions, Evaluations and Recommendations:

Example Heading

- Item description
    - Recommendation:
- Item description (photo #-#)

Example Heading

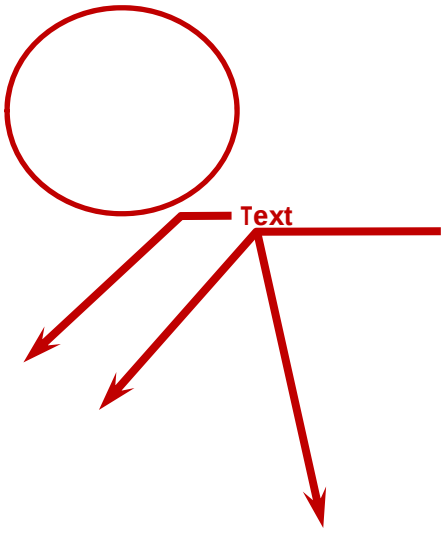
- Item description (photo #-#)
- Item description (photo #-#)

Compiled List of Deficiencies:

PHOTOGRAPHS

Photo 1

Photo 2



PHOTOGRAPHS

Photo 3

Photo 4

PHOTOGRAPHS

Photo 5

Photo 6

WOOD MATERIAL VISUAL INSPECTION CHECKLIST

1. ENVIRONMENTAL CONDITION	1A – Exposure		1B – Soils (Foundation Conditions)	
		Environment (Marine, Freshwater, Industrial, etc.)		Expansive soil
		Freezing and thawing		Compressive soil (settlement)
		Wetting and drying		Evidence of pumping
		Drying under dry atmosphere		Scour
		Chemical corrosion and attack (Sulfates, Acids, Bases, Chloride, Gases)		
		Abrasion, erosion, impact		
		Heat from adjacent sources		

2. DISTRESS INDICATORS		
		Cracking or breakage
		Rot and decay
		Surface deposits
		Termite or Pest Infestation (Borer)

3. PRESENT CONDITION OF STRUCTURE

3A - Overall Apparent Alignment of Structure

	Settlement		Deflection		Expansion		Contraction

3B – Surface Condition

General Condition	Excellent		New or near-new condition: no issues to report. No loss of cross section.
	Good		Good condition: no reported issues or concerns. Less than 5% loss of cross section.
	Fair		Average wear; not new but no issues to report. Between 5% - 20% cross section.
	Poor		Worn from use: Between 20% - 50% loss of cross section.
	Critical		Extremely worn or damaged: Between 50% - 80% loss of cross section.

Finished surfaces	
Cracking	
Loss of Material	
Missing or broken member	
Fasteners: Corrosion	
Soft timber and decay	
Abrasion	
Previous Repair	
Surface Coatings, Protective Systems	
Debris Buildup	
Structural Defects	
Moss	

STEEL MATERIAL VISUAL INSPECTION CHECKLIST

1. ENVIRONMENTAL CONDITION	1A – Exposure		1B – Soils (Foundation Conditions)	
		Environment (Marine, Freshwater, Industrial, etc.)		Expansive soil
		Freezing and thawing		Compressive soil (settlement)
		Wetting and drying		Evidence of pumping
		Drying under dry atmosphere		Scour
		Chemical corrosion and attack (Sulfates, Acids, Bases, Chloride, Gases)		
		Abrasion, impact		
		Heat from adjacent sources		

2. DISTRESS INDICATORS		
		Member cracking or breakage
		Staining, corrosion
		Surface deposits
		Weld cracking or breakage

3. PRESENT CONDITION OF STRUCTURE					
	3A - Overall Apparent Alignment of Structure				
		Settlement		Deflection	
	3B – Surface Condition				
	General Condition	Excellent		New or near-new condition: no issues to report. No loss of cross section.	
		Good		Good condition: no reported issues or concerns. Less than 5% loss of cross section.	
		Fair		Average wear; not new but no issues to report. Between 5% - 20% cross section.	
		Poor		Worn from use: Between 20% - 50% loss of cross section.	
		Critical		Extremely worn or damaged: Between 50% - 80% loss of cross section.	
	Finished surfaces				
	Cracking				
	Rust and scale				
	Loss of Material				
	Missing or broken member				
	Stains				
	Corrosion				
	Abrasion				
	Previous Repair				
	Surface Coatings				
	Debris Buildup				
	Structural Defects				
	Moss				

CONCRETE MATERIAL VISUAL INSPECTION CHECKLIST

1. ENVIRONMENTAL CONDITION

	1A – Exposure		**1B – Drainage**		**1C – Soils (Foundation Conditions)**
	Environment (Marine, Freshwater, Industrial, etc.)		Flashing		Expansive soil
	Freezing and thawing		Joint sealants		Compressive soil (settlement)
	Wetting and drying		Weepholes		Evidence of pumping
	Drying under dry atmosphere		Contour		Scour
	Chemical corrosion and attack (Sulfates, Acids, Bases, Chloride, Gases)		Elevation of drains		
	Abrasion, erosion, cavitation, impact				
	Heat from adjacent sources				

2. DISTRESS INDICATORS

	Cracking or Breakage
	Staining
	Surface deposits and exudations
	Leaking

3. PRESENT CONDITION OF STRUCTURE

3A - Overall Apparent Alignment of Structure

	Settlement		Deflection		Expansion		Contraction

3B – Surface Condition

General Condition	Excellent		New or near-new condition: no issues to report. No loss of cross section.
	Good		Good condition: no reported issues or concerns. Less than 5% loss of cross section.
	Fair		Average wear; not new but no issues to report. Between 5% - 20% cross section.
	Poor		Worn from use: Between 20% - 50% loss of cross section.
	Critical		Extremely worn or damaged: Between 50% - 80% loss of cross section.

Formed and finished surfaces	
Cracking	
Scaling	
Spalls, pop outs, and delamination	
Stains, Efflorescence	
Exposed Reinforcement: Corrosion	
Curling and warping	
Erosion	
Previous Patching or Other Repair:	
Surface Coatings, Protective Systems, Linings, Toppings	
Penetrating Sealers	
Signs of Past Overflow on Rungs and Walls	
Debris Buildup	
Exposed Aggregate	
Leaks through Walls	
Structural Defects	
Moss	